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Leu	Туг	: Asp	Ala	туг	Glu	Let	Lys	His	Ala	a Lei	ı Lys	G13	Ala	Gly	/ Thr	
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222	+ ~ ~	~~~		~												
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-10	+-P	195	****	лър	Olu	GIU	200	FIIE	116	1111	ire	205	стА	Thr	Arg	
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agt	gtg	tct	cat	ttg	aga	aag	gtg	ttt	gac	aag	tac	atq	act	ata	tca	672
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αa t	cat	acc	ctc	ato	200	at a	a + ~	a++	+							
Asp	His	Thr	Leu	Ile	aga Arq	yuu Val	aug Met	yıt Val	ser	agg Arc	agt	gag	att	gat	ctg	864

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Phe	Asn	Ile	Arg	Lys	Glu	Phe	Arg	Lys	Asn	Phe	Ala	Thr	ser	Leu	Tyr	
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tcc atg att aag gga gat aca tct ggg gac tat aag aaa gct ctt ctg 960 Ser Met Ile Lys Gly Asp Thr Ser Gly Asp Tyr Lys Lys Ala Leu Leu 305 310 315 320

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<213> Homo sapiens

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Lys Ala Met Lys Gly Leu Gly Thr Asp Glu Glu Ser Ile Leu Thr Leu $35 \hspace{1.5cm} 40 \hspace{1.5cm} 45$

Leu Thr Ser Arg Ser Asn Ala Gln Arg Gln Glu Ile Ser Ala Ala Phe $50 \hspace{1.5cm} 55 \hspace{1.5cm} 60 \hspace{1.5cm}$

Lys Thr Leu Phe Gly Arg Asp Leu Leu Asp Asp Leu Lys Ser Glu Leu 65 70 75 80

Thr Gly Lys Phe Glu Lys Leu Ile Val Ala Leu Met Lys Pro Ser Arg

Leu Tyr Asp Ala Tyr Glu Leu Lys His Ala Leu Lys Gly Ala Gly Thr 100 105 110

Asn Glu Lys Val Leu Thr Glu Ile Ile Ala Ser Arg Thr Pro Glu Glu 115 120 125

Leu Arg Ala Ile Lys Gln Val Tyr Glu Glu Glu Tyr Gly Ser Ser Leu 130 135 140

Ala Gln Val Glu Gln Asp Ala Gln Ala Leu Phe Gln Ala Gly Glu Leu 180 185 190

Lys Trp Gly Thr Asp Glu Glu Lys Phe Ile Thr Ile Phe Gly Thr Arg 195 200 205

Ser Val Ser His Leu Arg Lys Val Phe Asp Lys Tyr Met Thr Ile Ser $210 \ \ 215 \ \ \ 220 \ \ \$

Gly Phe Gln Ile Glu Glu Thr Ile Asp Arg Glu Thr Ser Gly Asn Leu 225 230 235 240

Glu Gln Leu Leu Leu Ala Val Val Lys Ser Ile Arg Ser Ile Pro Ala
245 250 255

Tyr Leu Ala Glu Thr Leu Tyr Tyr Ala Met Lys Gly Ala Gly Thr Asp $260 \hspace{1.5cm} 265 \hspace{1.5cm} 270$

Asp His Thr Leu Ile Arg Val Met Val Ser Arg Ser Glu Ile Asp Leu 275 280 285

Phe Asn Ile Arg Lys Glu Phe Arg Lys Asn Phe Ala Thr Ser Leu Tyr 290 295 300

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act Thr	gad Asp	tto Pho	c cct e Pro 20	Gly	ttt Phe	gat Asp	gag Glu	g egg Arg 25	Ala	gat Asp	gca Ala	gaa Glu	act Thi	Lei	cgg 1 Arg	 96
aag Lys	gct	ato Met	Lys	ggc Gly	tto Leu	ggg	aca Thr	Asp	gag Glu	gag Glu	g ago	atc Ile 45	Leu	g act ı Thr	ctg Leu	144
ttg Leu	aca Thr	Sei	cga Arg	agt Ser	aat Asn	get Ala 55	Gln	cgc Arg	cag Gln	gaa Glu	atc Ille 60	ser	gca Ala	gct Ala	ttt Phe	192
aag Lys 65	act Thr	ctg	ttt Phe	ggc	agg Arg 70	Asp	ctt Leu	ctg Leu	gat Asp	gac Asp 75	ctg Leu	aaa Lys	tca Ser	gaa Glu	cta Leu 80	240
act Thr	gga Gly	aaa Lys	ttt Phe	gaa Glu 85	aaa Lys	tta Leu	att Ile	gtg Val	gct Ala 90	ctg Leu	atg Met	aaa Lys	ccc Pro	tct Ser 95	cgg Arg	288
ctt Leu	tat Tyr	gat Asp	gct Ala 100	tat Tyr	gaa Glu	ctg Leu	aaa Lys	cat His 105	gcc Ala	ttg Leu	aag Lys	gga Gly	gct Ala 110	gga Gly	aca Thr	336
aat Asn	gaa Glu	aaa Lys 115	gta Val	ctg Leu	aca Thr	gaa Glu	att Ile 120	att Ile	gct Ala	tca Ser	agg Arg	aca Thr 125	cct Pro	gaa Glu	gaa Glu	384
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gaa Glu 145	gat Asp	gac Asp	gtg Val	gtg Val	ggg G1y 150	gac Asp	act Thr	tca Ser	G] À	tac Tyr 155	tac Tyr	cag Gln	cgg Arg	atg Met	ttg Leu 160	480
gtg Val	gtt Val	ctc Leu	ctt Leu	cag Gln 165	gct Ala	aac Asn	aga Arg	Asp	cct Pro 170	gat Asp	gct Ala	gga Gly	att Ile	gat Asp 175	gaa Glu	528
gct Ala	caa Gln	gtt Val	gaa Glu 180	caa Gln	gat Asp	gct Ala	Gln	get Ala 185	tta Leu	ttt Phe	cag Gln	Ala	gga Gly 190	gaa Glu	ctt Leu	576
aaa :	tgg	ggg	aca	gat	gaa	gaa	aag	ttt:	atc	acc	atc	ttt	aaa	aca	caa	624

Lys	Trp	Gly 195	Thr	Asp	Glu	Glu	Lys 200	Phe	Ile	Thr	Ile	Phe 205	Gly	Thr	Arg	_
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		caa Gln							_							720
		cta Leu									-	-			-	768
		gca Ala														816
		acc Thr 275					_	-			-			-	_	864
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- Lys Ala Met Lys Gly Leu Gly Thr Asp Glu Glu Ser Ile Leu Thr Leu 35 40 45
- Leu Thr Ser Arg Ser Asn Ala Gln Arg Gln Glu Ile Ser Ala Ala Phe $50 \hspace{1.5cm} 55 \hspace{1.5cm} 60 \hspace{1.5cm}$
- Lys Thr Leu Phe Gly Arg Asp Leu Leu Asp Asp Leu Lys Ser Glu Leu 65 70 75 80
- Thr Gly Lys Phe Glu Lys Leu Ile Val Ala Leu Met Lys Pro Ser Arg 85 90 95
- Leu Tyr Asp Ala Tyr Glu Leu Lys His Ala Leu Lys Gly Ala Gly Thr \$100\$ \$10\$
- As n Glu Lys Val Leu Thr Glu Ile Ile Ala Ser Arg Thr Pro Glu Glu 115 120 125
- Leu Arg Ala Ile Lys Gln Val Tyr Glu Glu Glu Tyr Gly Ser Ser Leu 130 135 140
- Glu Asp Asp Val Val Gly Asp Thr Ser Gly Tyr Tyr Gln Arg Met Leu 145 150 155 160
- Val Val Leu Gln Ala Asn Arg Asp Pro Asp Ala Gly Ile Asp Glu 165 170 175
- Ala Gln Val Glu Gln Asp Ala Gln Ala Leu Phe Gln Ala Gly Glu Leu $180 \hspace{1.5cm} 185 \hspace{1.5cm} 190 \hspace{1.5cm}$
- Lys Trp Gly Thr Asp Glu Glu Lys Phe Ile Thr Ile Phe Gly Thr Arg 195 200 205
- Ser Val Ser His Leu Arg Lys Val Phe Asp Lys Tyr Met Thr Ile Ser 210 215 220
- Gly Phe Gln Ile Glu Glu Thr Ile Asp Arg Glu Thr Ser Gly Asn Leu 225 230 235 240
- Glu Gln Leu Leu Ala Val Val Lys Ser Ile Arg Ser Ile Pro Ala 245 250 255
- Tyr Leu Ala Glu Thr Leu Tyr Tyr Ala Met Lys Gly Ala Gly Thr Asp 260 265 270
- Asp His Thr Leu Ile Arg Val Met Val Ser Arg Ser Glu Ile Asp Leu 275 280 285

rne	290		: AIG	гуз	GIU	295	Arg	гуs	ASII	Pne	300	rnr	ser	Leu	Tyr	-
ser 305	Met	Ile	Lys	Gly	Asp 310	Thr	ser	Gly	Asp	туг 315	Lys	Lys	Ala	Leu	Leu 320	
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			cga Arg													192
			ttt Phe													240
			ttt Phe													288
			gct Ala 100													336

										gaa Glu	-	384
										agc Ser	-	432
		_		-					_	 atg Met	_	480
										gat Asp 175	-	528
								_	-	 gaa Glu		576
										 aca Thr	-	624
		_	_	_		-	-		_	ata Ile		672
										aat Asn		720
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										aca Thr		816
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tcc atg att aag gga gat aca tct ggg gac tat aag aaa gct ctt ctg 960 Ser Met Ile Lys Gly Asp Thr Ser Gly Asp Tyr Lys Lys Ala Leu Leu 305 320-310 315 ctg ctc tcc gga gaa gat gac Leu Leu Ser Gly Glu Asp Asp 325 <210> 6 <211> 327 <212> PRT <213> Homo sapiens <400> 6 Met Ala Cys Gly Cys Gly His Met Ala Gln Val Leu Arg Gly Thr Val 10 Thr Asp Phe Pro Gly Phe Asp Glu Arg Ala Asp Ala Glu Thr Leu Arg 20 25 Lys Ala Met Lys Gly Leu Gly Thr Asp Glu Glu Ser Ile Leu Thr Leu 40 Leu Thr Ser Arg Ser Asn Ala Gln Arg Gln Glu Ile Ser Ala Ala Phe 50 Lys Thr Leu Phe Gly Arg Asp Leu Leu Asp Asp Leu Lys Ser Glu Leu 65 70 75 Thr Gly Lys Phe Glu Lys Leu Ile Val Ala Leu Met Lys Pro Ser Arg 85 90 Leu Tyr Asp Ala Tyr Glu Leu Lys His Ala Leu Lys Gly Ala Gly Thr 100 105 110 Asn Glu Lys Val Leu Thr Glu Ile Ile Ala Ser Arg Thr Pro Glu Glu 120 125

981

Leu Arg Ala Ile Lys Gln Val Tyr Glu Glu Glu Tyr Gly Ser Ser Leu 130 135 140

Glu Asp Asp Val Val Gly Asp Thr Ser Gly Tyr Tyr Gln Arg Met Leu 145 150 155 160

Val Val Leu Leu Gln Ala Asn Arg Asp Pro Asp Ala Gly Ile Asp Glu 165 170 175

- Ala Gln Val Glu Gln Asp Ala Gln Ala Leu Phe Gln Ala Gly Glu Leu $180 \hspace{1.5cm} 185 \hspace{1.5cm} 190 \hspace{1.5cm}$
- Lys Trp Gly Thr Asp Glu Glu Lys Phe Ile Thr Ile Phe Gly Thr Arg 195 \$200\$
- Ser Val Ser His Leu Arg Lys Val Phe Asp Lys Tyr Met Thr Ile Ser 210 215 220
- Gly Phe Gln Ile Glu Glu Thr Ile Asp Arg Glu Thr Ser Gly Asn Leu 225 230 235 240
- Glu Gln Leu Leu Leu Ala Val Val Lys Ser Ile Arg Ser Ile Pro Ala 245 250 255
- Tyr Leu Ala Glu Thr Leu Tyr Tyr Ala Met Lys Gly Ala Gly Thr Asp \$260\$ \$265\$ \$270\$
- Asp His Thr Leu Ile Arg Val Met Val Ser Arg Ser Glu Ile Asp Leu 275 280 285
- Phe Asn Ile Arg Lys Glu Phe Arg Lys Asn Phe Ala Thr Ser Leu Tyr 290 295 300
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<140> US 09/324,096

<141> 1999-06-01

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<170> PatentIn version 3.0

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<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(981)

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10

15

act gac ttc cct gga ttt gat gag cgg gct gat gca gaa act ctt cgg 96 Thr Asp Phe Pro Gly Phe Asp Glu Arg Ala Asp Ala Glu Thr Leu Arg

20

25

30

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aag act ctg ttt ggc agg gat ctt ctg gat gac ctg aaa tca gaa cta
240
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65 70 75 80

act gga aaa ttt gaa aaa tta att gtg gct ctg atg aaa ccc tct cgg
288
Thr Gly Lys Phe Glu Lys Leu Ile Val Ala Leu Met Lys Pro Ser Arg
85
90
95

ctt tat gat gct tat gaa ctg aaa cat gcc ttg aag gga gct gga aca 336 Leu Tyr Asp Ala Tyr Glu Leu Lys His Ala Leu Lys Gly Ala Gly Thr

100 105 110

aat gaa aaa gta ctg aca gaa att att gct tca agg aca cct gaa gaa 384 Asn Glu Lys Val Leu Thr Glu Ile Ile Ala Ser Arg Thr Pro Glu Glu

115 120 125

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135

140

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Glu Asp Asp Val Val Gly Asp Thr Ser Gly Tyr Tyr Gln Arg Met Leu
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155
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165

170

175

gct caa gtt gaa caa gat gct cag gct tta ttt cag gct gga gaa ctt 576 Ala Gln Val Glu Gln Asp Ala Gln Ala Leu Phe Gln Ala Gly Glu Leu

180

185

190

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195

200

205

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Ser Val Ser His Leu Arg Lys Val Phe Asp Lys Tyr Met Thr Ile Ser
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215
220

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720
Gly Phe Gln Ile Glu Glu Thr Ile Asp Arg Glu Thr Ser Gly Asn Leu
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230
235
240

gag caa cta ctc ctt gct gtt gtg aaa tct att cga agt ata cct gcc
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Glu Gln Leu Leu Ala Val Val Lys Ser Ile Arg Ser Ile Pro Ala
245
250
255

tac ctt gca gag acc ctc tat tat gct atg aag gga gct ggg aca gat 816
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260 265 270

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864
Asp His Thr Leu Ile Arg Val Met Val Ser Arg Ser Glu Ile Asp Leu
275
280
285

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912 Phe Asn Ile Arg Lys Glu Phe Arg Lys Asn Phe Ala Thr Ser Leu Tyr

290 295 300

tcc atg att aag gga gat aca tct ggg gac tat aag aaa gct ctt ctg

960

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305 310 315 320

ctq ctc tcc gga gaa gat gac

981

Leu Leu Ser Gly Glu Asp Asp

325

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<212> PRT

<213> Homo sapiens

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Lys Ala Met Lys Gly Leu Gly Thr Asp Glu Glu Ser Ile Leu Thr Leu 35 40 45

Leu Thr Ser Arg Ser Asn Ala Gln Arg Gln Glu Ile Ser Ala Ala Phe 50 55 60

Lys Thr Leu Phe Gly Arg Asp Leu Leu Asp Asp Leu Lys Ser Glu Leu 65 70 75 80

Thr Gly Lys Phe Glu Lys Leu Ile Val Ala Leu Met Lys Pro Ser Arg 85 90 95

Leu Tyr Asp Ala Tyr Glu Leu Lys His Ala Leu Lys Gly Ala Gly Thr $100 \hspace{1.5cm} 105 \hspace{1.5cm} 110$

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115 120 125

Leu Arg Ala Ile Lys Gln Val Tyr Glu Glu Glu Tyr Gly Ser Ser Leu 130 135 140

Glu Asp Asp Val Val Gly Asp Thr Ser Gly Tyr Tyr Gln Arg Met Leu 145 150 155 160

Val Val Leu Leu Gln Ala Asn Arg Asp Pro Asp Ala Gly Ile Asp Glu 165 170 175

Ala Gln Val Glu Gln Asp Ala Gln Ala Leu Phe Gln Ala Gly Glu Leu 180 185 190

Lys Trp Gly Thr Asp Glu Glu Lys Phe Ile Thr Ile Phe Gly Thr Arg 195 200 205

Ser Val Ser His Leu Arg Lys Val Phe Asp Lys Tyr Met Thr Ile Ser 210 215 220

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Glu Gln Leu Leu Ala Val Val Lys Ser Ile Arg Ser Ile Pro Ala 245 250 255

Tyr Leu Ala Glu Thr Leu Tyr Tyr Ala Met Lys Gly Ala Gly Thr Asp 260 270

Asp His Thr Leu Ile Arg Val Met Val Ser Arg Ser Glu Ile Asp Leu 275 280

Phe Asn Ile Arg Lys Glu Phe Arg Lys Asn Phe Ala Thr Ser Leu Tyr 290 295 300

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20 25 30

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Lys Ala Met Lys Gly Leu Gly Thr Asp Glu Glu Ser Ile Leu Thr Leu

35 40 45

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65 70 75 80

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85 90 95

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100 105 110

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115 120 125

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130 135 140

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480
Glu Asp Asp Val Val Gly Asp Thr Ser Gly Tyr Tyr Gln Arg Met Leu
145
150
155
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165 170 175

gct caa gtt gaa caa gat gct cag gct tta ttt cag gct gga gaa ctt 576 Ala Gln Val Glu Gln Asp Ala Gln Ala Leu Phe Gln Ala Gly Glu Leu

180 185 190

aaa tgg ggg aca gat gaa gaa aag ttt atc acc atc ttt gga aca cga 624 Lys Trp Gly Thr Asp Glu Glu Lys Phe Ile Thr Ile Phe Gly Thr Arg

195 200 205

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qaq caa cta ctc ctt gct gtt gtg aaa tct att cga agt ata cct gcc 768 Glu Gln Leu Leu Ala Val Val Lys Ser Ile Arg Ser Ile Pro Ala 245 250 255

tac ctt qca qaq acc ctc tat tat gct atg aag gga gct ggg aca gat 816 Tyr Leu Ala Glu Thr Leu Tyr Tyr Ala Met Lys Gly Ala Gly Thr Asp 265

270

gat cat acc ctc atc aga gtc atg gtt tcc agg agt gag att gat ctg 864 Asp His Thr Leu Ile Arg Val Met Val Ser Arg Ser Glu Ile Asp Leu

285 280 275

260

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912 Phe Asn Ile Arg Lys Glu Phe Arg Lys Asn Phe Ala Thr Ser Leu Tyr

290 295 300

tcc atg att aag gga gat aca tct ggg gac tat aag aaa gct ctt ctg 960 Ser Met Ile Lys Gly Asp Thr Ser Gly Asp Tyr Lys Lys Ala Leu Leu

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ctg ctc tcc gga gaa gat gac

981

Leu Leu Ser Gly Glu Asp Asp

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Leu Thr Ser Arg Ser Asn Ala Gln Arg Gln Glu Ile Ser Ala Ala Phe 50 60

Lys Thr Leu Phe Gly Arg Asp Leu Leu Asp Asp Leu Lys Ser Glu Leu 65 70 75 80

Thr Gly Lys Phe Glu Lys Leu Ile Val Ala Leu Met Lys Pro Ser Arg 85 90 95

Leu Tyr Asp Ala Tyr Glu Leu Lys His Ala Leu Lys Gly Ala Gly Thr $100 \\ 105 \\ 110$

Asn Glu Lys Val Leu Thr Glu Ile Ile Ala Ser Arg Thr Pro Glu Glu
115 120 125

Leu Arg Ala Ile Lys Gln Val Tyr Glu Glu Glu Tyr Gly Ser Ser Leu 130 \$135\$

Glu Asp Asp Val Val Gly Asp Thr Ser Gly Tyr Tyr Gln Arg Met Leu 145 $$ 150 $$ 155 $$ 160

Val Val Leu Leu Gln Ala Asn Arg Asp Pro Asp Ala Gly Ile Asp Glu 165 170 175

Ala Gln Val Glu Gln Asp Ala Gln Ala Leu Phe Gln Ala Gly Glu Leu 180 185 190

Lys Trp Gly Thr Asp Glu Glu Lys Phe Ile Thr Ile Phe Gly Thr Arg

Ser Val Ser His Leu Arg Lys Val Phe Asp Lys Tyr Met Thr Ile Ser 210 215 220

Gly Phe Gln Ile Glu Glu Thr Ile Asp Arg Glu Thr Ser Gly Asn Leu 225 230 235 240

Glu Gln Leu Leu Ala Val Val Lys Ser Ile Arg Ser Ile Pro Ala 245 250 255

Tyr Leu Ala Glu Thr Leu Tyr Tyr Ala Met Lys Gly Ala Gly Thr Asp $260 \hspace{1.5cm} 265 \hspace{1.5cm} 270 \hspace{1.5cm}$

Asp His Thr Leu Ile Arg Val Met Val Ser Arg Ser Glu Ile Asp Leu 275 280 285

Phe Asn Ile Arg Lys Glu Phe Arg Lys Asn Phe Ala Thr Ser Leu Tyr 290 295 300

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10

15

Thr Asp Phe Pro Gly Phe Asp Glu Arg Ala Asp Ala Glu Thr Leu Arg

20

25

30

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144

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Lys Thr Leu Phe Gly Arg Asp Leu Leu Asp Asp Leu Lys Ser Glu Leu
65 70 75 80

act gga aaa ttt gaa aaa tta att gtg gct ctg atg aaa ccc tct cgg
288
Thr Gly Lys Phe Glu Lys Leu Ile Val Ala Leu Met Lys Pro Ser Arg
...
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100 105 110

aat gaa aaa gta ctg aca gaa att att gct tca agg aca cct gaa gaa 384 Asn Glu Lys Val Leu Thr Glu Ile Ile Ala Ser Arg Thr Pro Glu Glu

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Glu Asp Asp Val Val Gly Asp Thr Ser Gly Tyr Tyr Gln Arg Met Leu
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Ala Gln Val Glu Gln Asp Ala Gln Ala Leu Phe Gln Ala Gly Glu Leu
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195 200 205

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672
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215
220

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260 265 270

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Asp His Thr Leu Ile Arg Val Met Val Ser Arg Ser Glu Ile Asp Leu
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280
285

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912 Phe Asn Ile Arg Lys Glu Phe Arg Lys Asn Phe Ala Thr Ser Leu Tyr

290 295 300

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ctg ctc tcc gga gaa gat gac

981

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Thr Asp Phe Pro Gly Phe Asp Glu Arg Ala Asp Ala Glu Thr Leu Arg $20 \\ 25 \\ 30$

Lys Ala Met Lys Gly Leu Gly Thr Asp Glu Glu Ser Ile Leu Thr Leu 35 40 45

Leu Thr Ser Arg Ser Asn Ala Gln Arg Gln Glu Ile Ser Ala Ala Phe 50 55 60

Lys Thr Leu Phe Gly Arg Asp Leu Leu Asp Asp Leu Lys Ser Glu Leu 65 70 75 80

Thr Gly Lys Phe Glu Lys Leu Ile Val Ala Leu Met Lys Pro Ser Arg 85 90 95

Leu Tyr Asp Ala Tyr Glu Leu Lys His Ala Leu Lys Gly Ala Gly Thr $100 \,$ $105 \,$ $110 \,$

Asn Glu Lys Val Leu Thr Glu Ile Ile Ala Ser Arg Thr Pro Glu Glu
115 120 125

Leu Arg Ala Ile Lys Gln Val Tyr Glu Glu Glu Tyr Gly Ser Ser Leu 130 \$135\$

Glu Asp Asp Val Val Gly Asp Thr Ser Gly Tyr Tyr Gln Arg Met Leu 145 150 155 \cdot 160

Val Val Leu Leu Gln Ala As
n Arg Asp Pro Asp Ala Gly Ile Asp Glu 165 $$ 170 $$ 175

Ala Gln Val Glu Gln Asp Ala Gln Ala Leu Phe Gln Ala Gly Glu Leu 180 185 190

Lys Trp Gly Thr Asp Glu Glu Lys Phe Ile Thr Ile Phe Gly Thr Arg
195 200 205

Ser Val Ser His Leu Arg Lys Val Phe Asp Lys Tyr Met Thr Ile Ser 210 215 220

Gly Phe Gln Ile Glu Glu Thr Ile Asp Arg Glu Thr Ser Gly Asn Leu 225 230 235 240

Glu Gln Leu Leu Ala Val Val Lys Ser Ile Arg Ser Ile Pro Ala 245 250 255

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UOFW113841.ST25.txt

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